2006-09-26 System Heads Meeting

- **Attendance**:
  - Roger D, Ron Moore, Keith Gollwitzer, Me, Paul Derwent, Craig Moore, Cons Gattuso, Vaia, Ioanis K., Valeri L.
- **Machine Strategy**:
  - **Operations**
    -
  - **Linac**
    - Ion source
      - Coming together - put ion pump back tomorrow????? I thought today????
    - Klystron problem
      - Still issues.
    -
  - **Booster**
    - Booster Orbit correction program
      - Bill Marsh is working on application
      - Coming along
      - Close to testing it.   Couple of weeks?
    - Push to 10Hz?
      - Need a plan
      -
  - **Pbar**
    - Target
      - Still has shaft corrosion. 12 hour job
      - Torque is back down.
      - What was done yesterday is the first few hours of the 12 hour job.
      - If it gets stuck, have to trigger 12 hour.
    - Stacktail measurements done
      - More complete, but werent done right.
      - Figured out what the unexpected phase jumps.   They were overdriving the beam.
      - Last measurement, lost the beam.
      - What is next?
        - do series of measurements. 1st set tomorrow.
        - Other measurements - stacking cycle worth of studies.
        - Hardware - swap polarity of amplifiers.   Decide how to correct this. One week time scales.
    - Debuncher cooling
      - 3 days to fix cooling pickups.   Cooling pickups are liquid He. Only one of two plats reporting
      - Weeks if have to pull out cooling tank.
      - May be heating the beam.
  - **Main Injector**
    - Transfer Efficiencies Accumulator to RR
      - Meeting yesterday.
      - See tails in Flying Wires.
      - If look at IPM in MI, see quad oscillations. Indicate a Beta-mismatch.
      - Have ripple on Accumulator injection kicker.
        - Know phase and amplitude - can back to kicker
        - Measure tbt oscillations with sbd
      - If it is the kicker, why is it worse now?
    - NuMI slip stacking
      - Goal to get multi-batch slip stacking operational by the end of the year with current intensities.
      - Need to understand kicker gap loss
      - 2.5e13 has been accelerated, but losses have been large.   Have to understand the loss.
    - Installing Collimators in MI?
      - Plan to install a collimation system next shutdown

- □ Before two stage collimation scheme in place, want to put a primary collimator (30mil tungsten) in. Will put a secondary collimator also.
- □ 2 day shutdown.
- □ 203 and 302 locations.
- □ Making a detailed plan
- ▪ We have an autotune program in the MI8 line that works.   Need to make all of the Booster cycles the same?
- ▪ BPM project winding down.   Outstanding:
  - □ 2.5MHz first turn and last turn for Pbars - noise problems.
  - □ Grounding is not good on the 60 buildings.
  - □ May need better BPM cables
- ▪ Pbar efficiencies for the shots
  - □ The over pbar efficiency from RR to MI - 84%, 3.6% RMS.
  - □ Last 10 stores - 85.7% - after step loss fixed.
  - □ 96.7%
- ○ **Recycler**
  - ▪ Small operating point change.
    - □ Intellectual exercise?
    - □ Harder to cool?
    - □ Not as dense
  - ▪ Transfers
  - ▪ AC installation is complete in Pelletron.
    - □ Still need to open up the Pelletron for two to three days.
- ○ **Tevatron**
  - ▪ Injection matching issues seen with IPM
    - □ Tried going in right direction.
    - □ Was not as clear cut as last data.
    - □ No changes left in.
    - □ Pbars want to investigate between Tev and A1 line.   Pbar only shot.
  - ▪ Problems with Struct BLT.   Experts have a handle on it.
  - ▪ TEL2 studies
    - □ Studiers changed the gating on schottkies to single bunch mode and then unaware ops made tune changes on this measurements.
    - □ Playing with one proton bunch. Want to show they can change the tune (improve the lifetime) of a particular bunch.
    - □ It is believed that there is more beam-beam effects on the protons.
  - ▪ Change in working point in the Tevatron
    - □ Not doing any studies.
    - □ New sextupole circuits.   Still waiting for supplies to be built (this fall).
    - □ May be little benefit if we are at a point where we want to cap the initial luminosity.
  - ▪ Keep pushing luminosity
  - ▪ Crystal collimator - not ready to go. Issues with binding of the linkages.   Should be able to be solved in a few weeks.   May be putting a new crystal in.

- ○ **External Beams**

  - ▪ **SY120**
    - □ Mtest - surveyors are in now. Finish up this week.
    - □ Doing as founds - getting elevation of the elements.   Issue coming up as elevation of the floor.
    - □ Roof work -
    - □ Goal is the middle of December
  - ▪ **MTA**
    - □ Would be able to fit beamline in upcoming shutdown.
    - □ Need 8 weeks?
  - ▪ **NuMI**
    - □
  - ▪ **MiniBooNE**
  - ▪
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